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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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EXAMINER

YOON, TAE H

| | |
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| ART UNIT | PAPER NUMBER |
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1714

DATE MAILED: 10/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|-----------------|--------------|--|
| Office Action Summary | Application No. | Applicant(s) | |
| | 10/009,343 | PARK ET AL. | |
| | Examiner | Art Unit | |
| | Tae H Yoon | 1714 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☒ Claim(s) 3 and 4 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: |

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The recited "(metha)" in (metha)acrylate in the specification and claims 3 and 4 is objected, and it should be "**(meth)**".

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicant states and claims the formula I including malonic acid, terephthalic acid and decanoic acid at pages 4 and 6 of the specification and in claim 2 , however, said formula I cannot yield said acids, and applicant failed to show how to obtain said acids from said formula I.

Claim 4 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The recited "and" in "acrylic oligomers having aliphatic/aromatic urethane groups **and**

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polyether groups" does not have support, and "or" is recited at the bottom of page 5 of the specification instead.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Improper Markush language is recited in claims 2-7 and an insertion of "the group consisting of" after "selected from" is needed. The recited "malonic acid, terephthalic acid and decanoic acid" in claim 2 lacks an antecedent basis in claim 1 since the formula I cannot yield said acids.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as obvious over Rossi et al (US 4,578,444).

Rossi et al teach an anaerobic adhesive composition comprising a monomeric disulfonimide, an (meth)acrylate monomer or oligomer or a mixture thereof, a minor

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amount of an acidic monomer such as itaconic acid or methacrylic acid at col. 1, lines 45-64 and in table 1 wherein 5 parts by weight of a methacrylic acid is seen. Initiators such as hydroperoxide and inhibitors such as hydroquinone are taught at col. 5, lines 11-50. Inorganic thickeners are taught at col. 6, line 60. Formamide and N,N'-diethyl formamide taught at col. 6, lines 29-30 meet the instant reducers, and the instant oligomers are taught at col. 4, lines 10-15.

It would have been obvious to one skilled in the art at the time of invention to make an anaerobic adhesive composition comprising the instant components with the claimed amount of an itaconic acid in Rossi et al or further to employ a mixture of (meth)acrylate monomer and oligomer since Rossi et al teach such modification.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rossi et al (US 4,578,444) in view of Pendergast (US 4,025,591), Matsuda et al (US 3,933,748), EP 0 443 916 or EP 0 499 483 and further in view of Bachmann (US 4,432,829) and applicant's disclosure at page 1.

The instant invention further recites other amine accelerators (reducers) such as benzoic sulfimide or dimethyl-p-toluidine in claim 7. However, the use of such reducers in combination with a peroxide curing system is well known in the art as taught by Pendergast (col. 7, lines 16-38), Matsuda et al (abstract), EP'916 (examples) or EP'483 (example 3). Bachmann teaches that any dibasic acid such as itaconic acid reduces anaerobic curing fixture times at col. 7, lines 43-48 and col. 4, lines 15-18. Applicant

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states that anaerobic adhesive composition comprising monomers, oligomers, inhibitors, oxidizers and reducers is common in the art at page 1 of the specification

It would have been obvious to one skilled in the art at the time of invention to make an anaerobic adhesive composition comprising the instant components with the claimed amount of an itaconic acid and benzoic sulfimide or dimethyl-p-toluidine of Pendergast, Matsuda et al or EPs in Rossi et al thereof since the use of said benzoic sulfimide or dimethyl-p-toluidine in combination with a peroxide curing system is well known in the art and since the advantage of using an itaconic acid in order to reduce anaerobic curing fixture times is also well known in the art and since applicant admits that anaerobic adhesive composition comprising monomers, oligomers, inhibitors, oxidizers and reducers is common in the art.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0 499 483 in view of Rossi et al (US 4,578,444) and further in view of Azuma et al (US 3,925,322), Bachmann (US 4,432,829) and applicant's disclosure at page 1.

EP teaches an anaerobic adhesive composition comprising a hydroperoxide, an o-benzoic sulfimide, a poly(meth)acrylate oligomer of bisphenol and an anaerobic monomer in example 3.

The instant invention further recites inhibitors, thickeners and dicarboxylic acid over EP. However, the use of said inhibitors, thickeners and dicarboxylic acid in an anaerobic adhesive composition is well known in the art as taught by Rossi et al as discussed above. Azuma et al teach the use of an inhibitor in example 10 and of a

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thickener at col. 5, lines 1-2. Azuma et al also teach various dicarboxylic acids at col. 5, lines 29-34. Bachmann teaches that any dibasic acid such as itaconic acid reduces anaerobic curing fixture times at col. 7, lines 43-48 and col. 4, lines 15-18.

It would have been obvious to one skilled in the art at the time of invention to make an anaerobic adhesive composition comprising the instant components in EP with teaching of Rossi et al, Azuma et al and Bachmann since the use of said inhibitor and thickener in combination with an anaerobic adhesive composition having a peroxide and reducer (imide) is well known in the art and since Rossi et al teach employing a (di)carboxylic acid and since the advantage of using a dicarboxylic acid in order to reduce anaerobic curing fixture times is also well known in the art as taught by Bachmann and since the recited other dicarboxylic acids are also well known as taught by Azuma et al and since and since applicant admits that anaerobic adhesive composition comprising monomers, oligomers, inhibitors, oxidizers and reducers is common in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tae H Yoon whose telephone number is (703) 308-2389. The examiner can normally be reached on Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Tae H Yoon
Primary Examiner
Art Unit 1714

THY/October 1, 2003